

# JOURNAL

OF THE

## New York Entomological Society

VOL. XLIV

JUNE, 1936

No. 2

### NINE NEW THYSANOPTERA FROM THE UNITED STATES\*

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#### *Heterothrips xolismæ* sp. nov.

♀ (macropterous).—Length about 1.0 mm. (slightly distended, 1.15 mm.). COLOR brown or blackish brown, with tarsi and third antennal segment yellow, fore tibiae with about distal third and the extreme base yellow or yellowish, the intermediate portion brown, fore femora and middle and hind tibiae yellow or yellowish at extreme apex; fore wings dark brownish gray except for a transverse white band near base.

HEAD of normal form, without the postocular angulation found in some species, somewhat broader across cheeks than across eyes, the cheeks nearly straight and slightly converging posteriorly; ocellar area and eyes at posterior margins delimited by a dark but not heavy chitinous line, the transverse occipital groove thus not prominent, the occipital area with about five anastomosing dark striæ; front of head slightly excavated as usual in front of ocelli but without a pair of deep pits behind the first antennal segments; frontal costa with the emargination U-shaped. EYES of normal form and structure, nearly as wide as their interval, measuring as follows ( $\mu$ ) in holotype: dorsal length 70, width 46, interval 51—these measurements being to the edges of the facets. OCELLI of posterior pair about  $14\mu$  in diameter,  $24\mu$  apart, and  $18\mu$  from median ocellus, the latter smaller, its diameter  $10\mu$ . ANTENNÆ nearly 2.2 times the length of pronotum and very nearly twice the greatest width of head, of normal form and structure, the segments shaped much as in *H. borinquen* (see Ins. Insc. Menstr., 3(1-4), Pl. I, fig. 1), except that segment V is narrower and not at all abruptly narrowed at base; segment III about 2.85 times as long as greatest width, its length from base to third incision about half the length of IV.

PROTHORAX about 0.9 as long as greatest width of head and about 1.5

\* The types of the new species described below are in the author's collection.

times as wide as its own median length, broader posteriorly, with sides and posterior margin broadly rounded and anterior margin nearly straight; notum with a few faint lines of sculpture at margins, only, the main portion of disk perfectly smooth, its setæ small and inconspicuous. MESONOTUM with distinct dark striæ, the transverse ones fully  $3\ \mu$  apart. METANOTUM without differentiated scutellum. WINGS of fore pair with about 32 setæ on costal margin, 26 on anterior vein, and 21 on posterior vein.

ABDOMEN stout (as is usual in the genus) and sharply pointed; microtrichia totally wanting, except on segments VIII and IX; posterior margins of terga I-VII fringed at sides with chitinous scales or plates whose distal margins are very evenly produced into short slender spines whose length is not more than one-fifth or sixth of that of the whole plate, the structure thus almost exactly as in *H. flavicornis* (see Ins. Insc. Menstr., 3(1-4), Pl. I, fig. 3); tergum I broadly bare across middle of posterior margin, II-V each usually with a few slender spines forming a comb at middle, but sometimes with as few as one or two such spines on the more basal terga; VI-VIII with the comb continuous and unbroken.

Measurements of ♀ (holotype), in mm.: Length about 0.99 (slightly distended, 1.15); head, length 0.111, width across eyes 0.143, greatest width across cheeks 0.146, least width near base 0.141; prothorax, median length 0.132, greatest width 0.202; mesothorax, greatest width 0.258; metathorax, greatest width 0.235; fore wings, length 0.690, width at middle 0.037; abdomen, greatest width 0.325.

Antennal segments:	1	2	3	4	5	6	7	8	9
Length ( $\mu$ ):	24	35	77	47	25	26	17	15	20
Width ( $\mu$ ):	30	26	27	28	19	17	12	10	7
Total length of antenna 0.286 mm.									

*Type*.—♀; Odenton, Maryland. June 20, 1915. (W. L. McAtee; in flowers of *Xolisma ligustrina* [Hood No. 31]).

*Paratypes*.—6 ♀♀; same data as types.

Although taken on a plant closely allied to the one on which *H. lyonia* is very common—a plant which most authorities now place in the genus *Lyonia*—this thrips is evidently quite distinct from any other North American species. In the character of the abdominal plates or scales its only ally in the temperate zone is *H. salicis*. This, however, has much shorter and stouter antennæ, with particularly stout intermediate segments. The other species of the Eastern United States, *H. lyonia*, *aesculi*, *azaleæ*, *arisaemæ*, and *limbatus*, all have the abdominal plates either produced into long, slender spines or else (in *limbatus* only) forming an unbroken series across the whole posterior margin of the second to fifth terga. The Panamanian *H. flavicornis*, with

which it well agrees in this detail of structure, is very different in color and in its heavy pronotal sculpture.

Genus **Sericopsotrips** nov.

(σηρικόν, silk; ὄψις, aspect; θρίψ, a wood-worm—in allusion to the silky appearance of the abdomen.)

Near *Sericotrips*. Head broad, finely cross-striate, its front nearly vertical above antennæ, the median ocellus directed forward. Eyes rounded, strongly protruding, coarsely faceted, pilose. Maxillary palpi three-segmented. Antennæ eight-segmented, with U-shaped sense-cones on segments III and IV. Pronotum crossed by numerous close, raised, anastomosing lines, and with one pair of long setæ at posterior angles. Legs moderately long and slender, tarsi especially slender. Fore wings with *anterior vein irregularly and sparsely setose in basal half, the distal half with two setæ only, these near apex; position of posterior vein marked by three setæ, one of them at middle of wing, the other two beyond.* Abdomen pubescent at sides, posterior margins of basal terga with delicate comb behind the pubescence, VIII with complete comb; segment IX not closely joined to X, its tergum with only four pairs of major setæ on dorsal and lateral surfaces; X long and slender.

Genotype: *Sericopsotrips palloris* sp. nov.

The single species upon which this genus is based is excluded from *Sericotrips* by the chaetotaxy of the fore wings and abdomen, and by the structure of the last two abdominal segments. It is of more than usual interest because it serves to connect the *Sericotrips* group of genera with the ordinary Thripid type in the characters which have been italicized in the description above, and because it leads us to suspect that the posterior vein of the fore wing of *Sericotrips* has been lost through degeneration rather than by fusion with the ambient vein.

**Sericopsotrips palloris** sp. nov.

♀ (macropterous).—Length about 1.0 mm. (distended, 1.16 mm.). COLOR of body and legs uniform yellowish white; wings colorless; all body and wing setæ colorless; antennæ with first two segments concolorous with body; third similarly pale in pedicel and basal half or more, then shaded with grayish, darkest at extreme tip; fourth darker than third, especially at apex, and similarly colored, but with a clear band just beyond pedicel; fifth darker in basal half than fourth, somewhat paler than fourth at apex, its pedicel dark and concolorous with tip of fourth, with a clear band just beyond pedicel; sixth to eighth uniform gray-brown, but paler than apex of fourth.

HEAD much broader across eyes than elsewhere and nearly twice as wide as median length, cheeks nearly straight and converging posteriorly, occipital

line wanting but posterior margin of head thickened; dorsum of head closely and very delicately cross-striate with anastomosing lines which do not produce a serration of the cheeks; setæ comprising four subequal and nearly equidistant ones in front of median ocellus (the median pair more anterior in position), a third pair within the ocellar area, closer together than diameter of median ocellus and arising about on the line of front margins of posterior ocelli, a fourth pair about  $23\ \mu$  long almost directly behind middle of posterior ocelli, a fifth equally long and slender pair behind and external to the last and close to eyes, a sixth and seventh pair on dorsal surface of cheeks just behind eyes, and an eighth pair on lateral outline of cheeks just behind the last two pairs. EYES very prominent, protruding, their posterior margins about  $26\ \mu$  from that of head, their dorsal length  $53\ \mu$ , width  $42\ \mu$ , and interval  $62\ \mu$ . OCELLI about  $17\ \mu$  in diameter, the posterior pair about  $26\ \mu$  apart. ANTENNÆ about 1.9 times as long as width of head across eyes, segments formed as in *Sericothrips*; segment VI not pedicellate, its sense-cones attached at base only; inner seta near apex of segment II about  $30\ \mu$  long, pale yellowish in color, more than twice the length of the outer seta; setæ on III-VIII light brownish, the inner dorsal on III about  $28\ \mu$ . MOUTH-CONE extending nearly to base of prosternum, its length (measured from base of labrum) about  $95\ \mu$ .

PROTHORAX with the pronotum about 0.7 as long as width of head across eyes and 1.5 times as wide as long, the raised, transverse, anastomosing lines distinct, delicate, and evenly and closely spaced (about 6 of them in  $10\ \mu$ ), nowhere tending toward reticulation; setæ all slender, pointed, one long outstanding pair ( $50\ \mu$ ) near posterior angles, the others short and subequal. MESONOTUM sculptured like pronotum, perhaps a little less strongly. METANOTUM nearly smooth, with faint polygonal subreticulation at middle. FORE WINGS nearly 16 times as long as width at middle; costal margin with about 25 pointed setæ (those at middle of wing about  $34\ \mu$ ) and 26 fringing hairs; longitudinal vein with a basal group of 3 setæ followed immediately by 4 (all confined to basal two-fifths of wing) and then by 2 or 3 widely spaced ones; posterior vein not evident, but its position apparently indicated by three widely spaced setæ in distal half of wing. LEGS long and slender, the femora, tibiæ, and tarsi of the hind pair measuring, respectively, in length (and width) as follows: 140(34), 175(30), 97(17)  $\mu$ .

ABDOMEN broadest at segment IV, tapering posteriorly, but with segments IX and X not closely united to form a conical unit, IX being rounded distally, X (+XI) long ( $92\ \mu$ ), slender ( $52\ \mu$ ), somewhat narrowed basally, and tapering only slightly to tip; abdominal pubescence close and pale, lacking from median portions of terga; comb complete only on posterior margin of VIII; median pair of setæ on I, VIII, IX, and X longer than their homologues on II-VII, those on IV-VII respectively about 16, 17, 18, and  $25\ \mu$ , those on I about  $30\ \mu$ ; the two dorsal pairs on VIII subequal and about  $38\ \mu$ , posterior lateral pair  $57\ \mu$ ; IX with a pair of strong setæ ( $43\ \mu$  long and  $38\ \mu$  apart) at distal third, and three pairs of long setæ near posterior margin, the first of these approximate,  $53\ \mu$  long, and only  $13\ \mu$  apart, the second dorso-



lateral in position and  $73\ \mu$  long, the third ventro-lateral and  $63\ \mu$  long, the last two pairs strongly diverging as in most Thripidae, a pair of minor setæ between the posterior dorsal and dorso-lateral setæ just described but closer to posterior margin of segment, a second minor pair above and somewhat posterior to the ventro-laterals, and beneath this minor pair either one or two pairs on sides of segment, in addition to several pairs originating on ventral surface; X with a dorsal pair ( $54\ \mu$  long and  $8\ \mu$  apart) near tip, a shorter and slenderer dorso-lateral pair, and several minor ones.

Measurements of ♀ (holotype), in mm.: Length about 1.04 (distended, 1.16); head, median dorsal length 0.073, width across eyes 0.145, greatest width across cheeks 0.130, least width near base 0.126; pronotum, median length 0.103, width 0.158; mesothorax, greatest width 0.242; metathorax, greatest width 0.227; fore wings, length 0.714, width at middle 0.045; abdomen, greatest width (at segment IV) 0.259.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	24	40	55	48	44	49	8	14
Width ( $\mu$ ):	27	28	21	20	17	17	9	5
Total length of antenna 0.282 mm.								

Described from 1 ♀ taken by the author at Canandaigua Lake, N. Y., May 29–30, 1934, from a species of *Vaccinium* growing on an arid hillside [Hood No. 568].

In general appearance the species is in all respects a true *Sericothrips*.

***Sericothrips chrysothamni* sp. nov.**

♀ (macropterous).—Length about 1.0 mm. (distended, about 1.2 mm.). COLOR pale, with numerous brown markings; fat-body pigmentation of pterothorax and last abdominal segment largely orange-colored, of remainder of body whitish yellow, as seen by reflected light, duller and more grayish as seen by transmitted light; general color of head pale brown, darkest in the ocellar region, along cheeks, and across back of head, permitting the whitish internal pigmentation to show through the remaining portions, thus indistinctly encircling the eyes with whitish and giving an area of whitish across the whole front of head; prothorax cream-colored by reflected light, with a distinct, unbroken, brown, pronotal blotch whose anterior margin is concave and sharply defined, and whose posterior margin is deeply and roundly emarginate at middle and thus bilobed; pterothorax with an orange-yellow cast (due to the internal pigmentation), the front and sides of the mesothorax shaded with dark brown, the metanotum with its anterior portion bearing a brown blotch which is nearly as wide as the pronotal one and which is in the form of a transverse hexagon whose posterior side is emarginate, and from each of whose two anterior and two posterior angles radiates a narrow brown spot; abdomen with last four segments brown or blackish-brown, the posterior portions of VII and X disclosing the whitish internal pigmentation; anterior part of abdomen much paler, its extreme sides brown;

tergum I with a brief, transverse, dark line on each side of middle near base, II-VII each with a narrow, transverse, nearly black line at base, II-VI shaded with brown posterior to this line; ventrally the head is brown, but paler in the basal portion of the mouth-cone, the large meso- and metasternal plates and the last four abdominal segments deep brown, the remainder of the abdomen almost uniform cream-colored, except at sides; antennæ, by reflected light, nearly white in segments I and II, distinctly whitish in III-V, the distal portions of these last and all of VI-VIII gray-brown; by transmitted light, especially in caustic-treated specimens, III-V are seen to be successively darker, and darker than I and II, III lightly gray just beyond pedicel and darker at extreme tip, IV shading to gray-brown in distal half or less, V darker throughout, shading to gray-brown in about distal half, but not quite so dark at extreme tip as IV, VI-VIII nearly uniform gray-brown; legs with all coxæ dark brown, remainder largely whitish by reflected light, the fore femora shaded with brown only along outer surface, the middle femora similarly shaded and with a dark cloud just beyond middle, the hind pair much darker, their basal two-fifths pale, remainder brown, shading to pale at extreme tip; all tibiæ pale, shaded with brown along outer surface at middle, all tarsi pale (save for the brown cups); fore wings almost uniform pale yellowish, lightly shaded with gray in basal portion of scale, and with a small distinct cloud at basal third, setæ on costal margin, scale, and anterior vein, brown; ocellar pigmentation red.

HEAD broadest across eyes, cheeks rounded and slightly converging to base, somewhat serrated because of short, raised lines of sculpture which do not extend onto dorsum of head; ocellar area and posterior margin of head elevated, striate with anastomosing lines, the intervening portion forming a smooth transverse groove; front of head cross-striate; setæ as usual in the genus (*i.e.*, four subequal and nearly equidistant ones in front of median ocellus, the median pair more anterior in position, a third pair just outside a line tangent to outer margins of median and posterior ocelli, one pair ( $28\ \mu$  long) just behind posterior ocelli and slightly external to their outer margins—this last pair inclined forward and with their points just meeting—two minute pairs posterior to the last and close to the eyes, two pairs on dorsal surface of cheeks just behind eyes, one nearly lateral pair in front of middle of cheeks, and another pair ventral to and behind the last). EYES prominent, protruding, pilose, extending to within  $12\ \mu$  of the posterior margin of the head,\* their dorsal width  $46\ \mu$ , dorsal interval  $63\ \mu$ , ventral width  $42\ \mu$ , ventral interval  $71\ \mu$ . OCELLI about  $11\ \mu$  in diameter, the posterior pair  $28\ \mu$  apart and  $17\ \mu$  from median ocellus. ANTENNÆ about 1.74 times as long as width of head across eyes, segments formed as usual in this section of the genus; III about  $53\ \mu$ , IV about  $45\ \mu$ , each with a short, U-shaped sense-cone, that on III about  $17\ \mu$  long; VI not pedicellate, its two long sense-cones attached

\* The posterior margin of the head merges so gradually into the membrane connecting the head with the pronotum that its exact limit cannot be accurately determined; and for convenience I have, perhaps arbitrarily, taken as its posterior margin that of the dark-colored portion.

at sides and forming narrow pale lines, of which the inner originates near middle of segment and the outer somewhat beyond; setæ on III and IV, and inner dorsal seta on II, moderate in size and brownish, the inner dorsal on III about 28  $\mu$ , the outer dorsal on II minute and pale. MOUTH-CONE extending about to base of prosternum, its length (measured from base of labrum) about 120  $\mu$ , the three segments of the maxillary palpus 23, 14, and 20  $\mu$ , respectively.

PROTHORAX with the pronotum about 0.7 as long as width of head across eyes and about 1.7 times as wide as long, the transverse anastomosing lines not prominent, more closely spaced in the area of the pronotal blotch than in front of it, nowhere tending toward reticulation; setæ of normal size and arrangement, the large, light-brown, outstanding pair near posterior angles about 52  $\mu$ . MESONOTAL PLATE about 134  $\mu$  in extreme width, simply and moderately closely striate (about 6 transverse striæ in 10  $\mu$ ). FORE WINGS about 21 times as long as width at middle; costal margin with about 25 setæ, longitudinal vein with a basal group of 3 followed by about 18; one additional seta near tip of wing, between and behind the last two on longitudinal vein; setæ on costal margin and longitudinal vein respectively 47 and 37  $\mu$  at middle of wing. LEGS normal.

ABDOMEN thoroughly typical; pubescence distinct, lacking from median portions of terga I-V, excepting across the extreme base of IV and V; comb complete only on posterior margin of VII and VIII, sometimes weak and irregular on the former; major abdominal setæ brownish yellow.

Measurement of ♀ (holotype), in mm.: Length about 1.0 (distended, 1.19); head, median dorsal length of dark portion 0.073, width across eyes 0.155, least width just behind eyes 0.146, greatest width across cheeks 0.149, least width near base 0.142; pronotum, median length 0.117, width 0.197; mesothorax, greatest width 0.263; metathorax, greatest width 0.246; fore wings, length 0.742, width at middle 0.036; abdomen, greatest width 0.322.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	20	40	53	45	41	44	13	14
Width ( $\mu$ ):	24	27	18	18	17	16	7	5

Total length of antenna 0.270 mm.

♂ (macropterous).—Length about 0.78 mm. (distended, 0.95 mm.). Color and structure almost as in female, excepting that segment VII of the abdomen is pale like VI; abdomen more slender than in female, normal to the genus.

Described from 21 ♀♀ and 4 ♂♂, all taken by the author at Galice, Oregon, July 24, 1927, on stems and leaves of a species of *Chrysothamus* growing in the flood plain of the Rogue River.

The coloration of the abdomen, wings, and head distinguish this species at once from all members of its genus, with the exception of *S. moultoni* Jones, from which it differs conspicuously in the possession of an unbroken pronotal blotch, the pale scale at the base of the fore wings, the narrower and less finely striate

mesonotum, and the much shorter intermediate antennal segments.

The color of this species is highly adaptive. The delicate dorsal sculpture and the microtrichia on the abdomen and wings eliminate all shine, while the internal pigmentation, showing through the paler portions of the integument, aid in giving the insect a general grayish color which renders it almost invisible against the stems of the plant on which it lives. The color description given above can best be followed by supplementing, or at times replacing, the light from the substage mirror of the microscope by an intense, direct illumination from above.

**Sericothrips opuntiae** sp. nov. (Fig. 1, a, b).

♀ (macropterous).—Length about 1.0 mm. (distended, about 1.2 mm.). COLOR pale whitish yellow, with indistinct brown markings; pronotum with the usual gray-brown median blotch fragmented, consisting of a more or less continuous transverse band whose ends involve the two pairs of small foveæ on each side (this band arcuate posteriorly at middle), and two pairs of obscure spots which occupy the two pairs of posterior foveæ, the anterior pair of spots larger, transverse, and often more or less divided into two; mesothorax obscurely shaded with gray at sides and front margin of mesoscutum, and with the axillary sclerites and the tips of tegulæ darker; metanotum with a pair of obscure gray-brown spots; abdomen with the usual conspicuous dark brown transverse line at base of terga II–VII, behind which, at either end, is a brown spot; pleurites shaded with brown, and a pair of small round spots at sides of sterna III–VI or III–VII; legs concolorous with lighter portions of body, little or not shaded with gray; fore wings with grayish-yellow cast, with a slightly darker cloud in the area of the three subbasal setæ and another cloud at basal third, its setæ brown; antennæ rather pale, major setæ brown, segment I nearly colorless, II yellowish and slightly darker, III yellowish, with narrowed basal portion beyond pedicel and distal fourth gray-brown, IV and V similar, but with pedicels and distal fourth brown, the former segment a trifle darker at apex than the latter, VI–VIII gray-brown, VI usually paler toward base; ocellar pigmentation red.

HEAD (Fig. 1, a) much broader across eyes than elsewhere, cheeks slightly rounded and distinctly converging to base, occipital line indistinct, pale, interrupted at middle, no transverse groove behind eyes; entire dorsum of head faintly cross-striate; setæ as usual in the genus and as described above for *S. chrysothamni*, the postocellar pair only 23  $\mu$ , the lower lateral pair on cheeks not visible from above. EYES prominent, protruding, pilose, extending to within 11  $\mu$  of the occipital line, their dorsal length (when the head is horizontal and not tipped downward) about 76  $\mu$ , their width 51  $\mu$ , least interval 61  $\mu$ , ventral width 42  $\mu$ , ventral interval 79  $\mu$ . OCELLI about 12  $\mu$  in diameter, nearly equidistant, about 20  $\mu$  apart. ANTENNÆ (Fig. 1, b)



about 1.6 times as long as width of head across eyes, segments formed as usual in this section of the genus; III about  $54\ \mu$ , IV about  $46\ \mu$ , each with a short, U-shaped sense-cone, that on III about  $23\ \mu$  long; VI not pedicellate; inner seta on dorsum of antennal segment II subequal to outer seta and unusually short ( $14\ \mu$ ), distal dorsal setae on III and IV brown, likewise short ( $19\ \mu$ ), barely surpassing apex of segments. MOUTH-CONE extending about to base of prosternum, its length (measured from base of labrum) about  $110\ \mu$ , the three segments of the maxillary palpus 20, 11, and  $17\ \mu$ , respectively.

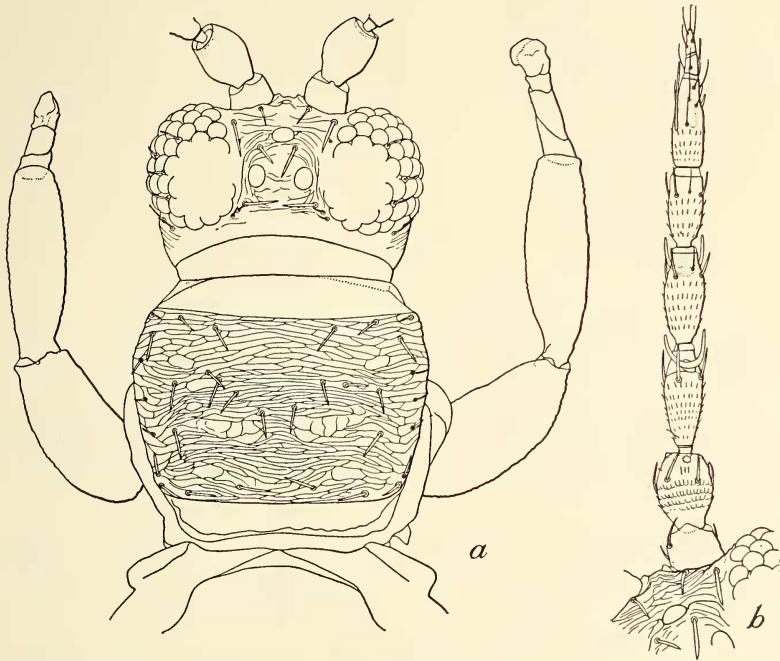


Figure 1. *Sericothrips opuntiae* sp. nov., ♀, paratype. *a*, head and prothorax (all setae omitted from appendages); *b*, right antenna.

PROTHORAX (Fig. 1, *a*) with the pronotum about 0.66 as long as width of head across eyes and about 1.7 times as wide as long, the transverse anastomosing lines quite distinct even in specimens not treated with caustic, somewhat more closely spaced in the area of the pronotal blotch than in front of it, scarcely tending toward reticulation; setae of normal arrangement, the pair at posterior angles pale yellowish like the others, but closely appressed to pronotum and only  $20\ \mu$  in length. MESONOTAL PLATE about  $135\ \mu$  in extreme width, simply and moderately closely striate (about 6 transverse striae in  $10\ \mu$ ). FORE WINGS short ( $574\ \mu$ ), scarcely 15 times as long as width



at middle ( $40\ \mu$ ); costal margin with about 25 setæ which are shorter than or about equal to their intervals, those at middle of wing only  $20\ \mu$ ; longitudinal vein with a basal group of three followed by about 19, all of them particularly short ( $18\ \mu$ ) and scarcely half as long as width of wing at middle; no additional seta near tip of wing, between and behind the last two on longitudinal vein. LEGS normal.

ABDOMEN thoroughly typical; pubescence indistinct, completely lacking from median portions of terga I-V, sparse across the base of VI; comb complete only on posterior margins of VII and VIII; major abdominal setæ yellow on distal segments, more brownish on basal ones.

Measurements of ♀ (paratype), in mm.: Length about 0.97 (distended, 1.24); head, median length in front of occipital line 0.083, width across eyes 0.164, greatest width across cheeks 0.150, least width near base 0.133; pronotum, median length 0.109, width 0.181; mesothorax, greatest width 0.210; metathorax, greatest width 0.209; abdomen, greatest width (at segment IV) 0.281.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	20	38	54	46	37	45	11	13
Width ( $\mu$ ):	28	28	21	20	18	17	7	5

Total length of antenna 0.264 mm.

♂ (macropterous).—Length about 0.8 mm. (distended, 0.94 mm.). Color and structure essentially as in female, the abdomen more slender, normal to the genus.

Described from 12 ♀♀ and 6 ♂♂, all taken by the writer on a large tree-like cactus belonging to the genus *Opuntia* (Dr. Paul C. Standley, det.), near the Indian village of Comobabi, on the Papago Indian Reservation in Arizona, August 28, 1927 [Hood No. 852].

The absence of setæ from the median portions of the basal abdominal terga, together with the coloration, the moderately slender legs, and the lack of additional setæ on the fore wing behind the distal end of the longitudinal vein, separate this species from all others in the genus with the exception only of *apicalis* and the three new ones described below. In all four of these last, however, the inner seta near the apex of the second antennal segment is much longer, stronger, and darker than the relatively indistinct outer seta, instead of subequal to it. In *apicalis*, too, the distal setæ on antennal segments III and IV distinctly surpass the apices of the segments and measure  $23\text{--}33\ \mu$  in comparison with  $19\ \mu$  in the present species; the seta near the posterior angle of the pronotum is more than  $50\ \mu$  in length, instead of  $20\ \mu$ , and outstanding, rather than closely appressed; and the wing-setæ are much

stronger, those of the costal series at middle of wing being about  $47\ \mu$  and longer than the width of the wing at this point, in comparison with a length of about  $20\ \mu$ —which is only half the width of the wing—in *opuntia*.

**Sericothrips collaris** sp. nov.

♀ (macropterous).—Length about 1.0 mm. (distended, about 1.12 mm.). COLOR straw yellow (more whitish by reflected light), with obscure, dark, gray-brown markings consisting of a spot occupying each pronotal fovea (sometimes very indistinct), a spot near each lateral angle of mesoseutum (these often more or less connected by a spot on anterior margin of mesoseutum), a pair of larger spots on metasutum, and a dark line across bases of terga II–VII, the lines on III–VII each with a small rounded spot behind each end; legs concolorous with body; fore wings pale yellowish, nearly colorless, with a slight brown cloud on longitudinal vein at the origin of its two most basal setæ and a second obscure cloud between vein and poster margin of wing just beyond scale, setæ all dark and conspicuous; antennæ with segments I and II yellowish and nearly concolorous with body, II distinctly shaded with gray, III–VIII more grayish but only slightly darker, III with an indistinct gray-brown cloud in narrow portion just beyond pedicel and distinctly gray-brown across apex, IV with pedicel concolorous with apex of III and its own apex shaded like that of III but a trifle more darkly, V colored like IV but not so darkly shaded at apex, VI–VIII nearly uniform gray brown; ocellar pigmentation yellow (slightly brownish).

HEAD broader across eyes than elsewhere and nearly twice as wide as length to occipital line, cheeks slightly rounded and converging posteriorly; dorsum of head faintly cross-striate in occipital region and cheeks (but not elsewhere), the cheeks just visibly serrulate; setæ as usual in the genus and as described above for *S. chrysothamni*, the third or interocellar pair located well within the ocellar triangle, the postocellars only  $24\ \mu$  long, and the outer postocular pair nearly on the profile of the cheeks, with the usual cheek-seta in front of it and ventro-lateral in position. EYES not as prominent as usual in the genus, less protruding, pilose, about  $16\ \mu$  from occipital line, their dorsal length  $56\ \mu$ , dorsal width  $40\ \mu$ , dorsal interval  $57\ \mu$ , ventral width  $36\ \mu$ , ventral interval  $66\ \mu$ . OCELLI about  $13\ \mu$  in diameter, the posterior pair about  $21\ \mu$  apart and  $18\ \mu$  from median ocellus. ANTENNÆ about 1.6 times as long as width of head across eyes, segments formed about as usual in this section of the genus, but more stout; III  $43\ \mu$ , IV  $34\ \mu$  and only twice as long as wide, each with a short, biramous sense-cone which is more in the form of a broad V than a U, that on IV with its median axis about  $13\ \mu$  long; VI not pedicellate; major setæ on segments II–V short, stout, and brown, the inner dorsal on III about  $20\ \mu$  only, the inner one on II much larger than the outer. Mouth-cone extending about to base of prosternum, its length (measured from base of labrum) about  $126\ \mu$ , the three segments of the maxillary palpus unusually short, measuring 14, 13, and  $14\ \mu$ , respectively.

PROTHORAX large, the pronotum about 0.82 as long as width of head across eyes and 1.5 times as wide as long, the transverse anastomosing lines pale, not prominent, not more closely spaced in the area of the pronotal blotch (about 7 of them in 20  $\mu$ ), nowhere tending toward reticulation, unusual in that those near the margins are concentric, with the ones at the lateral margins thus longitudinal (!); setæ rather short and heavy, light brownish yellow, two outstanding pairs at posterior angles, the inner ones about 53  $\mu$ , the outer 21  $\mu$ . MESONOTUM faintly cross-striate. FORE WINGS about 16 times as long as width at middle, slender and pointed at tip; costal margin with about 23 conspicuous, brown setæ which taper only slightly and are rather abruptly pointed at apex, those at middle of wing about 56  $\mu$ ; longitudinal vein with 17-21 similar setæ (no basal group of 3), those at middle of wing about 47  $\mu$ ; no additional setæ near tip of wing behind vein. Legs normal.

ABDOMEN thoroughly typical; pubescence minute, close, and very indistinct, lacking from median portions of terga I-VIII and from all of IX and X; comb complete only on posterior margin of VIII (where the teeth are minute), irregular on VII; lateral setæ and those on X all brown, dorsal ones yellow.

Measurements of ♀ (holotype), in mm.: Length about 0.98 (distended, 1.12); head, median length to occipital line 0.073, width across eyes 0.138, greatest width across cheeks 0.136, least width near base 0.126; pronotum, median length 0.113, width 0.168; mesothorax, greatest width 0.242; metathorax, greatest width 0.232; fore wings, length 0.630, width at middle 0.040; abdomen, greatest width (at segment IV) 0.290.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	16	35	43	34	31	41	12	13
Width ( $\mu$ ):	21	25	17	17	16	15	6	4

Total length of antenna 0.225 mm.

♂ (macropterous).—Length about 0.67 mm. (distended, 0.75 mm.). Color and essential structure almost as in female; abdomen more slender.

Described from 10 ♀♀ and 1 ♂, all taken by the author at Wickenburg, Arizona, August 25, 1927, on a plant which Dr. Paul C. Standley has determined as "*Hymenoclea monogyra?*" [Hood No. 881].

*S. opuntiae*, described immediately above, and *S. ctenogastris*, described below, are undoubtedly the closest known allies of the present species. From the former it differs most notably in the much longer setæ on the wings and at the posterior angles of the pronotum, in the unequal lengths of the two dorsal setæ near the apex of the second antennal segment, in the very short and stout fourth antennal segment, and in a character possessed by no other species of the genus excepting the very different *S. sensillis*,—

namely, the longitudinal arrangement of the striæ at the extreme sides of the pronotum. From *S. ctenogastris*, the only other species excepting *sensillis* with the fourth antennal segment as short, it is best distinguished by the distinct dorsal markings and the complete absence of any comb on the posterior margins of the fifth and sixth abdominal terga. *S. sensillis*, though resembling the present species in its pronotal sculpture, is unique in having the sense-cones on the third and fourth antennal segments simple and fingerlike, rather than V- or U-shaped; and it differs, too, in that the pronotal and wing setæ are much shorter.

***Sericothrips ctenogastris* sp. nov.**

♀ (macropterous).—Length about 1.0 mm. (distended, 1.1 mm.). COLOR uniform straw-yellow (more whitish by reflected light), without darker markings of any sort; legs concolorous with body; fore wings nearly colorless, with two barely perceptible clouds, one of them at the origin of the two most basal setæ on the longitudinal vein, the other between vein and posterior margin of wing just beyond scale; setæ on wings all moderately dark, yellowish brown, and conspicuous; antennæ with segments I and II yellowish and concolorous with body, II scarcely shaded with gray, III-VIII pale and hardly darker than I and II, III with an indistinct gray-brown cloud in narrow portion just beyond pedicel and narrowly and indistinctly gray-brown at extreme apex, IV with its very short pedicel concolorous with apex of III and its own apex shaded like that of III but somewhat more broadly and darkly, V colored like IV but not so dark at apex, VI-VIII nearly uniform yellowish gray; ocellar pigmentation yellow.

HEAD broader across eyes than elsewhere and about 1.7 times as wide as length to occipital line, cheeks rounded to eyes, nearly straight and converging posteriorly; head faintly cross-striate in occipital region and on cheeks (but not elsewhere), the cheeks just visibly serrulate; setæ as usual in the genus and as described above for *S. chrysothamni*, the third or interocellar pair located on or close to a line tangent to the outer edges of the median and posterior ocelli, the postocellars about 27  $\mu$  long, and the outer postocular pair nearly on the profile of the cheeks, with the usual cheek-seta beneath it and ventro-lateral in position. EYES not as prominent as usual in the genus, less protruding, pilose, about 15  $\mu$  from occipital line, their dorsal length about 60  $\mu$ , dorsal width 40  $\mu$ , dorsal interval 53  $\mu$ . OCELLI about 13  $\mu$  in diameter, the posterior pair about 25  $\mu$  apart and 17  $\mu$  from median ocellus. ANTENNÆ about 1.6 times as long as width of head across eyes, segments formed about as usual in this section of the genus, but more stout; III 40  $\mu$ , IV 30  $\mu$  and distinctly less than twice as long as wide, each with a short biramous sense-cone which is more in the form of a broad V than a U, that on IV with its median axis about 12  $\mu$  long; VI not pedicellate; major setæ on segments III-V short, stout, and

brown, the inner dorsal on III about  $17\ \mu$  long, the inner one on II  $21\text{--}24\ \mu$ , much larger than the outer, and more yellowish than those on III. Mouth-cone (measured from base of labrum) about  $125\ \mu$ , the three segments of the maxillary palpus unusually short, measuring 14, 13, and  $14\ \mu$ , respectively.

PROTHORAX large, the pronotum about 0.84 as long as width of head across eyes and about 1.5 times as wide as long, the transverse anastomosing lines pale, not prominent, not more closely spaced in the central portion than elsewhere (about 9 of them in  $20\ \mu$ ), nowhere tending toward reticulation, those near lateral margins not longitudinal; setæ strong but not particularly short, light brownish yellow in color, two outstanding pairs at posterior angles, the inner ones about  $57\ \mu$ , the outer  $31\ \mu$ . MESONOTUM very faintly cross-striate. FORE WINGS about 17 times as long as width at middle, slender and pointed at tip; costal margin with 19–22 conspicuous yellowish brown setæ which taper only slightly and are rather abruptly pointed at apex, those at middle of wing about  $52\ \mu$ ; longitudinal vein usually with either 17 or 18 similar setæ, of which a basal group of three is usually a little isolated from the others, those at middle of wing about  $48\ \mu$ ; no additional setæ near tip of wing behind vein. LEGS normal.

ABDOMEN with pubescence minute, close, and very indistinct, lacking from median portions of terga I–VIII and almost certainly also from IX and X; comb complete on posterior margin of terga VI–VIII (!), occasionally nearly or quite complete on V; lateral setæ and those on X all brown, dorsal ones yellow.

Measurements of ♀ (holotype), in mm.; Length about 0.97 (distended, 1.09); head, median length to occipital line 0.078, width across eyes 0.133, greatest width across cheeks 0.132, least width near base 0.125; pronotum, median length 0.112, width 0.170; mesothorax, greatest width 0.228, metathorax, greatest width 0.224; fore wings, length 0.616, width at middle 0.035; abdomen, greatest width (at segment IV) 0.259.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	17	35	40	30	31	40	8	12
Width ( $\mu$ ):	21	26	17	18	17	15	6	4

Total length of antenna 0.213 mm.

♂ (macropterous).—Length about 0.65 mm. (distended, 0.79 mm.). Color and essential structure almost as in female; comb complete on abdominal terga VI–VIII; abdomen slender.

Described from 9 ♀♀ and 1 ♂, all taken by the author on *Hymenoclea monogyra* Torr. and Gray (determined by Dr. Paul C. Standley), near Phoenix, Arizona, August 26, 1927 [Hood No. 884].

The affinities of this species were treated above, under the



description of *S. collaris*. With that species and *S. sensillis*, described below, it forms a natural group characterized by the short and stout antennal segments. The three complete combs on the sixth, seventh, and eighth abdominal segments distinguish it readily from both.

**Sericothrips sensillis** sp. nov.

♀ (macropterous).—Length about 0.84 mm. (distended, 1.01 mm. COLOR uniform straw-yellow (more whitish by reflected light), without darker markings of any sort excepting a dark transverse line at the bases of terga III–VII; legs concolorous with body; fore wings nearly colorless, their setæ all moderately dark, yellowish brown, and conspicuous; antennæ with segments I and II yellowish and concolorous with body, II scarcely shaded with gray, III–VIII pale and hardly darker than I and II, III with an indistinct gray-brown cloud in narrow portion just beyond pedicel and narrowly gray-brown at extreme apex, IV with its very short pedicel concolorous with apex of III and its own apex shaded like that of III but somewhat more broadly, V colored like IV but not so dark at apex, VI–VIII nearly uniform yellowish gray; ocellar pigmentation yellow.

HEAD somewhat broader across eyes than across cheeks and about 1.4 times as wide as length to occipital line, cheeks rounded to eyes, nearly straight and converging posteriorly; dorsum of head exceedingly faintly cross-striate in occipital region only, the cheeks not serrulate; setæ as usual in the genus and as described above for *S. chrysothamni*, the third or interocellar pair located on or close to a line tangent to the outer edges of the median and posterior ocelli, the postocellars only 16  $\mu$  long, and the outer postocular pair nearly on the profile of the cheeks, with the usual cheek-seta beneath and anterior to it, and ventro-lateral in position. EYES not as prominent as usual in the genus, less protruding, pilose, about 13  $\mu$  from occipital line, their dorsal length about 56  $\mu$ , dorsal width 34  $\mu$ , dorsal interval 50  $\mu$ . OCELLI about 12  $\mu$  in diameter, the posterior pair about 20  $\mu$  apart and 15  $\mu$  from median ocellus. ANTENNÆ about 1.6 times as long as width of head across eyes, segments formed about as usual in this section of the genus, but more stout; III only 33  $\mu$ , IV only 25  $\mu$  and distinctly less than twice as long as wide, each with a simple, short, stout, finger-shaped sense-cone; VI not pedicellate; major setæ on segments III–V short, stout, and brown, the inner dorsal on III only 11  $\mu$  long, the inner one on II about 15  $\mu$ , much larger and darker than the outer, and about concolorous with those on III. MOUTH-CONE (measured from base of labrum) about 111  $\mu$ .

PROTHORAX about 0.8 as long as width of head across eyes and about 1.5 times as wide as long, the transverse anastomosing lines pale, not prominent, not more closely spaced in the central portion than elsewhere (9–10 of them in 20  $\mu$ ), nowhere tending toward reticulation, unusual in that those near the margins are concentric, with the ones at the extreme lateral margins thus

longitudinal (!); setæ short and heavy, the two outstanding pairs at posterior angles brown and darker than those on disc, the inner ones  $34\ \mu$ , the outer  $17\ \mu$ . MESONOTUM very faintly cross-striate. FORE WINGS about 14 times as long as width at middle, slender and pointed at tips; costal margin with 20-21 conspicuous yellowish brown setæ which taper only slightly and are rather abruptly pointed at apex, those at middle of wing about  $33\ \mu$ ; longitudinal vein with 17 similar setæ, of which a basal group of three is rather distinctly separated from the others, those at middle of wing about  $32\ \mu$ ; no additional setæ near tip of wing behind vein. LEGS normal.

ABDOMEN thoroughly typical; pubescence minute, close, and very indistinct, lacking from median portions of terga I-VIII and from all of IX and X; comb complete on posterior margins of VII and VIII, a broad median gap in the comb on VI and all preceding terga; lateral setæ and those on X all brown, dorsal ones yellow.

Measurements of ♀ (holotype), in mm.: Length about 0.84 (distended, 1.01); head, median length to occipital line 0.084, width across eyes 0.118, greatest width across cheeks 0.114, least width near base 0.107; pronotum, median length 0.093, width 0.138; mesothorax, greatest width 0.179; metathorax, greatest width 0.177; fore wings, length 0.498, width at middle 0.035; abdomen, greatest width (at segment IV) 0.206.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	16	33	33	25	29	36	8	12
Width ( $\mu$ ):	21	24	16	15	16	14	6	4

Total length of antenna 0.192 mm.

Described from 1 ♀, taken by the author on *Isocoma venata* var. *arguta* Jeps. (determined by Dr. Paul C. Standley), at Quijotoa, Arizona, August 28, 1927 [Hood No. 903].

Remarkable, indeed, is the character of the antennal sensoria, causing one perhaps to doubt the correctness of the assignment of the species to the genus in which it has been placed; and yet in no other respect does the insect show the slightest departure from the fundamental structure of the genus; nor is it, save in this one feature, more different from *collaris* and *ctenogastris* than are these two from each other. Were it not for the differently proportioned antennal segments, the shorter pronotal and wing setæ, the more closely striate pronotum, and the smaller size, the author would have been inclined to consider it possibly a mutation of *S. collaris* and to defer its description indefinitely; but the additional light which it throws upon what he considers the superficiality of any classification based upon antennal sense-organs has seemed to warrant its naming at the present time.

**Trichothrips xanthocephalus** sp. nov.

♀ (brachypterous).—Length about 1.3 mm. (very slightly distended, 1.5 mm.). Head lemon-yellow; thorax and abdomen brown, the abdomen concolorous with prothorax in its basal portion, shading to yellow in segment VII, and with VIII–X bright yellow, the pterothorax appreciably paler than prothorax and base of abdomen, the tube with a narrow ring of gray at tip; legs concolorous with head, middle and hind femora very lightly shaded with brown; antennæ with segments I and II yellowish in color, somewhat darker than head because of a light brown shading, III–VIII uniform blackish brown, with only the pedicel of III yellow; fat-body pigmentation dull red.

HEAD about 1.25 times as long as greatest width, broadest at about basal third, cheeks rounded to base and slightly tapering in anterior portion, abruptly rounded to the small eyes, the width across the latter distinctly less than the least width of head near base and about 0.87 the greatest width; dorsum of head, as seen from the side, somewhat elevated in the occipital region; vertex not produced or overhanging, its apex on a line with front margin of eyes, its surface lightly subreticulate; posterior portion of cheeks with delicate, pale, anastomosing lines which encroach onto the dorsum of head in occipital region; postocular setæ pale yellowish, about 81  $\mu$  long, 120  $\mu$  apart, and 23  $\mu$  from posterior margin of eyes, their tips broadly rounded, rather than pointed or dilated; setæ on cheeks minute, pale, and pointed; dorso-cephalic setæ minute, 71  $\mu$  apart and 33  $\mu$  behind postoculars. EYES very small, less than one-fourth the length of head and about two-thirds as wide as their interval, measuring as follows in  $\mu$ : length 45, width 39, interval 60. OCELLI small, the median one on the same line as front margin of eyes, one of the posterior ocelli wanting in the holotype. ANTENNÆ twice the length of head, formed almost exactly as in *T. angusticeps*, segment VIII lanceolate and pedicellate (see Hood, Bull. Ill. State Lab. Nat. Hist., 8(2): 367, Fig. 4, b); sense-cones on inner (outer) surfaces as follows: III 1(2), IV 1(2), V 1(1<sup>+</sup>), VI 1(1<sup>+</sup>), VII 1 dorsal; all antennal setæ long and pointed. MOUTH-CONE extending well past middle of prosternum, its length beyond dorsal margin of head about 118  $\mu$ .

PROTHORAX along median dorsal line of pronotum about 0.72 as long as head and (inclusive of coxæ) about 2.1 times as wide as long, without median thickening, without trace of sculpture except for about two faint striæ at posterior margin, epimeron not fused with pronotum; major setæ all present, long, yellow in color, with broadly rounded or slightly dilated tips, their lengths as follows in  $\mu$ : antero-marginals 39, antero-angulars 53, midlaterals 60, epimerals 88, postero-marginals 87, coxals 73. PTEROTHORAX very slightly narrower than width of prothorax inclusive of coxæ. WINGS about attaining base of abdomen, the fore pair with two long setæ which are about comparable with antero-marginals. LEGS thoroughly typical, the fore tarsus with a very minute tooth.

ABDOMEN of normal form and structure, broadest at segment III, where

it is much wider than pterothorax, its dorsal surface free of sculpture excepting for the usual transverse subbasal line across each of terga II-VIII and faint, anastomosing, minutely asperate lines which form an obscure subreticulation at sides of segments and which are continued across the dorsal surface of the more basal segments; tube (segment X only) about 0.73 the length of head and about 1.8 times as long as its own greatest subbasal width, the last distinctly more than twice the distal width, the sides almost perfectly straight; abdominal setæ long, slender, all pointed excepting the dorso-lateral pair on VIII which is rounded at tip and  $74\ \mu$  long, all yellow excepting the terminal ones, which are brown; VII with the lateral setæ  $156\ \mu$ , VIII with these  $117\ \mu$ , IX with lateral and dorsal setæ subequal and about  $183\ \mu$ , longest terminal setæ  $170\ \mu$ .

Measurements of ♀ (holotype), in mm.: Length about 1.33 (very slightly distended, 1.46); head, length 0.198, width across eyes 0.138, greatest width across cheeks 0.159, least width near base 0.147, length of head in front of eyes 0.028; prothorax, median length of pronotum 0.142, greatest width (inclusive of coxae) 0.298; mesothorax, greatest width 0.295; abdomen, greatest width 0.358; tube (segment X only), length 0.145, greatest subbasal width 0.080, least apical width 0.037.

Antennal segments:	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	40	50	52	50	52	51	50	50
Width ( $\mu$ ):	44	33	35	33	31	27	23	15
Total length of antenna 0.395 mm.								

*Type*.—♀; Tallulah, Louisiana. October 4, 1934. (Dr. J. W. Folsom; "in humus").

*T. americanus* and *T. angusticeps* are the only other North American species known to me which have the eighth antennal segment pedicellate and the fourth segment with one sense-cone on the inner and two on the outer surface. The former of these has the head much shorter and all the major setæ pointed, while the latter—to which it is indeed closely allied—has both the head and tube much shorter and the dorso-lateral pair of setæ on abdominal terga I-VII distinctly knobbed. *T. angusticeps* differs, too, in coloration, its head, legs, and tip of abdomen being distinctly brownish instead of bright lemon-yellow.

***Diopsothrips louisianæ* sp. nov.**

♀ (apterous).—Length about 1.4 mm. (rather fully distended, 1.85 mm.). General color brown, with head and pterothorax largely golden yellow, the head with front and vertex brown and with a faint brown dorsal cloud extending to near base, the pterothorax shaded with brown along anterior and lateral margins, the abdomen somewhat paler in the four basal segments, tube bright



reddish brown, with its extreme tip black; legs largely yellow, with fore femora shaded with brown basally, and middle and hind femora shaded with brown along most of outer surface; antennæ with segments I, II and about basal third of III golden yellow, the remainder of III shading to light blackish brown in apical half or more, IV-VII uniform dark blackish brown; fat-body pigmentation scattered, its color orange-red by transmitted light, more (or quite) yellowish by reflected light.

HEAD nearly 1.1 times as long as greatest width, broadest shortly behind middle, the cheeks subparallel and rounded about equally to eyes and to a slightly broader basal collar, the width across eyes about 0.92 the greatest width and about equal to the least width in front of base; vertex full, rounded, but not overhanging, sloping abruptly to antennal bases, with a pair of strong, pointed, yellowish setæ,  $50\mu$  long and  $61\mu$  apart, laterad and caudad of median ocellus, the vertical pores situated close to inner margins of eyes and on a line just posterior to the setæ; a pair of minute pale setæ  $17\mu$  long and  $61\mu$  apart situated just in front of middle of eyes and about  $35\mu$  behind median ocellus; postoculars pointed, pale yellowish, about  $85\mu$  long and  $122\mu$  apart, arising about  $5\mu$  from posterior margin of eyes; dorso-cephalic setæ minute, about  $85\mu$  apart and  $73\mu$  from base of head; cheeks with four or five similar pairs of minute, pale, pointed setæ, one of which is directly laterad of the large posterior facet of eyes, one laterad of the postoculars, the others near middle of cheeks and somewhat more dorsal in position; dorsal surface of head perfectly smooth save for a very faint, pale subreticulation in posterior part of cheeks. EYES small in the apterous type, about 0.3 the length of the head, their length  $60\mu$ , interval approximately  $100\mu$ , composed of a few small ( $12\mu$ ) anterior facets and about three large posterior ones, the most caudad of which is the largest and about  $26\mu$  in diameter. OCELLI represented in the apterous type by the median one only, this  $16\mu$  in diameter and with its anterior margin about  $20\mu$  in advance of that of eyes. ANTENNÆ stout, 7-segmented, the last without trace of any cross-suture; sense-cones slender, pointed, and moderately long, disposed as follows on the inner (outer) surfaces: III 1(1), IV 2(2), V 1( $1^{+}$ ), VI 1( $0^{+}$ ), VII 1 dorsal; all antennal setæ long and pointed. MOUTH-CONE semicircularly rounded at tip, extending well past middle of pronotum, its length beyond dorsal margin of head about  $157\mu$ .

PROTHORAX along median dorsal line of pronotum 0.7 as long as head and (inclusive of coxæ) about 2.4 times as wide as long, without median thickening, without trace of sculpture except for about three dark, distinct, anastomosing striæ along extreme posterior margin, epimeron fused with pronotum posteriorly; all usual setæ present, yellow, nearly pointed, their lengths as follows, in  $\mu$ : antero-marginals 60, antero-angulars 40, midlaterals 73, epimerals 110 postero-marginals 90, coxals 53. MESONOTUM with parallel, somewhat anastomosing, faintly asperate, cross-striæ. METANOTUM with the striæ non-asperate and forming polygons over most of the surface. LEGS rather short and stout, the fore tarsus with a stout tooth which is nearly equilaterally triangular in form. WINGS completely wanting.

ABDOMEN heavy, but not broad, widest at segment IV, where its width is



about 1.1 times that of prothorax across coxæ; sterna IV-VII with their anterior margins slightly arched forward; dorsal surface free of sculpture excepting for the usual transverse subbasal line across terga III-VIII and distinct, dark, fine, anastomosing lines in all of tergum I and the basal two-thirds of tergum II, the sculpture of the former more distinct and nearly polygonal; tube (segment X only) 1.26 times the length of head, about 2.26 times as long as its own greatest (subbasal) width, and just three times as broad near base as at apex, the latter abruptly constricted, the sides of tube nearly parallel in about basal fourth and arcuately tapering to the apical constriction, its surface with three or four longitudinal ridges on each side and numerous colorless, slender, curved setæ; terminal setæ weak, brownish yellow basally, about 83  $\mu$  long; setæ on IX yellow, moderately heavy, pointed, the dorsal pair 204  $\mu$ , the lateral pair 234  $\mu$ .

Measurements of ♀ (holotype), in mm.: Length about 1.43 (rather fully distended, 1.85); head, length 0.196, width across eyes 0.166, greatest width across cheeks 0.181, least width near base 0.168; prothorax, median length of pronotum 0.137, width (inclusive of coxæ) 0.333; mesothorax, greatest width 0.346; abdomen, greatest width 0.370; tube (segment X only), length 0.247, greatest subbasal width 0.109, least apical width 0.036.

Antennal segments:	1	2	3	4	5	6	7
Length ( $\mu$ ):	47	58	66	59	54	47	71
Width ( $\mu$ ):	46	37	37	39	37	33	28
Total length of antenna 0.402 mm.							

*Type*.—♀; Tallulah, Louisiana. April 10, 1934. (Dr. J. W. Folsom; "in humus").

The two other species of *Diopsothrips* are known only from Panama, and it has therefore seemed desirable to describe the present one in order to add the genus to the North American list, even though it must be made known from the apterous form. The much darker color of the abdomen of *louisianæ* should distinguish it readily from *flavus*, as should also the longer cephalic and pronotal setæ and the less constricted tube. The macropterous form should be largely, if not entirely brown, with the pterothorax if not the head, about concolorous with the abdomen; and its coloration should therefore agree more closely with that of *brunneus*. That species, however, has the third antennal segment uniform dark yellow, instead of largely blackish brown, and the segments beyond the third much paler than in *louisianæ*. It is also larger, with differently proportional antennal segments and tube, and the two pairs of setæ on the anterior margin of the pronotum are much shorter.